

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A nonvolatile memory comprising:
a memory cell array comprising a plurality of memory cells over a substrate,
each memory cell comprising a pair of at least first and second memory elements as a
unit that,

wherein each of first and second memory elements has a low state and a high
state regarding electric characteristics and can transit only from a first the low state to a
second the high state that are different in electric characteristics by applying at least a
voltage or a current, and

wherein [[a]] the memory cell is formed that stores 1-bit data by using two states
a (L, H) state that one the first memory element is in the first low state and the other
second memory element is in the second high state and a (H, L) state that the first
memory element is in the high state and the second memory element is in the low state.

2. (Withdrawn) A nonvolatile memory comprising at least three memory
elements as one unit that can transit only from a first state to a second state that are
different in electric characteristics by applying at least a voltage or a current,

wherein a memory cell is formed that stores data by using only a state that a
certain number of memory elements transit from the first state to the second state.

3. (Currently Amended) A nonvolatile memory comprising:
a memory cell array comprising a plurality of memory cells over a substrate,
each memory cell comprising a pair of at least first and second memory elements as a
unit that,

wherein each of first and second memory elements has a low state and a high state regarding electric characteristics and can transit only from a first the low state to a second the high state that are different in electric characteristics by applying at least a voltage or a current,

wherein [[a]] the memory cell is formed that stores 1-bit data by using two states a (L, H) state that the first memory element is in the low state and the second memory element is in the high state and a (H, L) state that the first memory element is in the high state and the second memory element is in the low state, and

wherein the (L, H) state and the (H, L) state cannot be transited to each other by applying a voltage or a current to at least one of the first memory element or and the second memory element.

4. (Withdrawn) A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different in electric characteristics by applying at least a voltage or a current,

wherein a memory cell is formed that stores data by using only a state that cannot be transited to each other among combinations obtained in the unit.

5. (Currently Amended) A nonvolatile memory comprising:

a memory cell array comprising a plurality of memory cells over a substrate, each memory cell comprising a pair of at least first and second memory elements as a unit that,

wherein each of first and second memory elements has a low state and a high state regarding threshold voltage and can transit only from a first the low state to a second the high state that are different from a threshold voltage by applying a voltage, and

wherein [[a]] the memory cell is formed that stores 1-bit data by using two states a (L, H) state that one the first memory element is in the first low state and the other

second memory element is in the second high state and a (H, L) state that the first memory element is in the high state and the second memory element is in the low state.

6. (Withdrawn) A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different from a threshold voltage by applying a voltage,

wherein a memory cell is formed that stores data by using only a state that a certain number of the memory elements transit from the first state to the second state.

7. (Currently Amended) A nonvolatile memory comprising:

a memory cell array comprising a plurality of memory cells over a substrate, each memory cell comprising a pair of at least first and second memory elements as a unit that,

wherein each of first and second memory elements has a low state and a high state regarding threshold voltage and can transit only from a first the low state to a second the high state that are different from a threshold voltage by applying a voltage,

wherein ~~[[a]]~~ the memory cell is formed that stores 1-bit data by using two states that a (L, H) state that the first memory element is in the low state and the second memory element is in the high state and a (H, L) state that the first memory element is in the high state and the second memory element is in the low state among the (L, H) state, the (H, L) state, a (L, L) state that the first memory element is in the low state and the second memory element is in the low state, and a (H, H) state that the first memory element is in the high state and the second memory element is in the high state, and

wherein the (L, H) state and the (H, L) state cannot be transited to each other by applying a voltage to the pair of memory elements among four states that can be obtained by the pair of memory elements at least one of the first memory element and the second memory element.

8. (Withdrawn) A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different from a threshold voltage by applying a voltage,

wherein a memory cell is formed that stores data by using only a state that cannot be transited to each other among states that can be obtained in the unit.

9. (Currently Amended) A nonvolatile memory comprising:

a memory cell array comprising a plurality of memory cells over a substrate, each memory cell comprising a pair of at least first and second memory elements as a unit that,

wherein each of first and second memory elements has a low state and a high state regarding resistance value and can transit only from a first the low state to a second the high state that are different from a resistance value by applying a current, and

[[a]] wherein the memory cell is formed that stores 1-bit data by using two states a (L, H) state that one the first memory element is in the first low state and the other second memory element is in the second high state and a (H, L) state that the first memory element is in the high state and the second memory element is in the low state.

10. (Withdrawn) A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different from a resistance value by applying a current,

wherein a memory cell is formed that stores data by using only a state that a certain number of the memory elements transit from the first state to the second state.

11. (Currently Amended) A nonvolatile memory comprising:

a memory cell array comprising a plurality of memory cells over a substrate,
each memory cell comprising a pair of at least first and second memory elements as a
unit that,

wherein each of first and second memory elements has a low state and a high
state regarding resistance value and can transit only from a first the low state to a
second the high state that are different from a resistance value by applying a current,

wherein [[a]] the memory cell is formed that stores 1-bit data by using two states
two states that a (L, H) state that the first memory element is in the low state and the
second memory element is in the high state and a (H, L) state that the first memory
element is in the high state and the second memory element is in the low state among
the (L, H) state, the (H, L) state, a (L, L) state that the first memory element is in the low
state and the second memory element is in the low state, and a (H, H) state that the first
memory element is in the high state and the second memory element is in the high
state, and

wherein the (L, H) state and the (H, L) state cannot be transited to each other by
applying a current to the pair of memory elements among four states that can be
obtained by the pair of memory elements at least one of the first memory element and
the second memory element.

12. (Withdrawn) A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different from a resistance value by applying a current,

wherein a memory cell is formed that stores data by using only a state that cannot be transited to each other among combinations obtained in the unit.

13. (Currently Amended) The nonvolatile memory according to any one of claims 1 to 12[[.]] wherein further comprising a unit for outputting a signal for determining if the memory cell stores data or not is provided.

14. (Currently Amended) The nonvolatile memory according to claim 5 or 8, wherein each of the first and second memory elements has a charge accumulating layer comprising at least one of a polycrystalline silicon film, a microcrystalline silicon film, a metal film, a microcrystalline metal film, ~~or~~ and a nitride film.

15. (Previously Presented) An IC card incorporated with the nonvolatile memory according to any one of claims 1 to 12.

16. (Previously Presented) An ID card incorporated with the nonvolatile memory according to any one of claims 1 to 12.

17. (Previously Presented) An ID tag incorporated with the nonvolatile memory according to any one of claims 1 to 12.